1 **What is claimed is:**

2   1.   A method for communicating content to a plurality of clients,

3 comprising the steps of:

4   (a)   providing multiple network attached storage (NAS) servers;

5   (b)   storing content files on each NAS server for access by one or more

6 clients;

7   (c)   receiving a request for a content file from a client via a communication

8 link;

9   (d)   selecting one of the NAS servers that stores the requested content file;

10   (e)   establishing a data stream between that client and the selected NAS

11 server; and

12   (f)   providing the requested content file from the selected NAS to the

13 requesting client via the data stream, independent of other NAS servers.

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15   2.   The method of claim 1, wherein step (d) further includes the steps of

16 determining if one of the NAS servers stores the requested content file, and if so,

17 selecting that NAS server and performing steps (e) and (f).

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19   3.   The method of claim 1, wherein:

20   step (a) further includes the steps of obtaining identification information

21 from each NAS server and maintaining that information;

22   step (b) further includes the steps of maintaining content information

23 corresponding to each identified NAS server; and

24   step (d) further includes the steps of checking the content information

25 to determine if one of the identified NAS servers stores the requested content file,

26 and if so, selecting that NAS server and performing steps (e) and (f).

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28   4.   The method of claim 1, wherein:

29   step (a) further includes the steps of providing one or more spare NAS

30 servers;

1   step (b) further includes the steps of storing content files on said spare

2   servers; and

3   the method further including the steps of:

4   (g)   detecting a fault in an NAS server currently providing requested

5   content file to a client;

6   (h)   identifying a spare NAS server storing that requested content

7   file; and

8   (i)   selectively re-establishing said data stream between that client

9   and the spare NAS storing the requested content file, wherein that spare NAS server

10   provides the content file to the client via the data stream, independent of other NAS

11   servers.

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13   5.   The method of claim 1, wherein step (e) further includes the steps of

14   authenticating the identity of the client before providing the requested content file to

15   the client.

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17   6.   The method of claim 1, wherein step (f) further includes the steps of

18   receiving authentication information from that client, verifying the authentication

19   information, and providing the requested content file only if the authentication

20   information is verified.

21

22   7.   The method of claim 1, wherein:

23   step (c) further includes the steps of: receiving multiple requests for content

24   files from multiple clients;

25   step (d) further includes the steps of: for each requesting client, selecting one

26   of the NAS servers that stores the content file requested by that client;

27   step (e) further includes the steps of: establishing a data stream between

28   each requesting client and the selected NAS server for that client; and

29   step (f) further includes the steps of: providing each requested content file

30   from a selected NAS server to the requesting client via the corresponding data

31   stream, independent of other NAS servers.

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2   8.   The method of claim 7, wherein said multiple requests are random in

3   time.

4

5   9.   A video server for communicating content to a plurality of clients,

6   comprising:

7   one or more network attached storage (NAS) servers, each NAS

8   server storing content files for access by one or more clients; and

9   a management controller connected to the clients and the NAS servers

10   via a communication link, wherein the management controller receives a request for

11   a content file from a client, and selectively establishes a data stream between that

12   client and a selected NAS server which stores the requested content file, such that

13   the selected NAS server provides the content file to the client via the data stream,

14   independent of other NAS servers.

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16   10.   The video server of claim 9 further comprising a switch for connecting

17   the clients to the NAS servers in response to control signals, via a communication

18   line.

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20   11.   The video server of claim 10, wherein the switch is configured to

21   provide data routing between the NAS server and the clients.

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23   12.   The video server of claim 10, wherein the management controller is

24   connected to the clients and the NAS servers by the communication link via the

25   switch.

26

27   13.   The video server of claim 12, wherein the switch is configured to

28   provide data routing between the NAS server and the clients in response to control

29   signals from the management controller.

30

1   14.   The video server of claim 9, wherein at least one NAS server

2   comprises one or more data storage devices and a storage controller for

3   coordinating access to the data storage devices.

4

5   15.   The video server of claim 9, wherein at least one NAS server

6   concurrently provides multiple data streams to multiple clients.

7

8   16.   The video server of claim 9, further comprising one or more spare NAS

9   servers, such the management controller is configured to detect a fault in an NAS

10   server currently providing requested content file to a client, and to identify a spare

11   NAS server storing that requested content file, such that the management controller

12   selectively re-establishes said data stream between that client and the spare NAS

13   storing the requested content file, wherein that spare NAS server provides the

14   content file to the client via the data stream, independent of other NAS servers.

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16   17.   The video server of claim 9, wherein management controller is

17   configured to allow addition or removal of one or more NAS servers.

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19   18.   The video server of claim 9, wherein the management controller

20   includes an NAS monitor module which monitors operation of each NAS server, and

21   selects NAS servers to provide content files to clients.

22

23   19.   The video server of claim 18, wherein the management controller

24   includes a client interface module which receives requests from clients and forwards

25   the requests to the NAS monitor module.

26

27   20.   The video server of claim 9, wherein each NAS server includes a data

28   streaming interface module which provides service for reading content files from that

29   NAS server and sending the data to the requesting client via a data stream.

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1   21.   A management controller for a video server for communicating content

2   from multiple NAS servers storing content files to a plurality of clients, comprising:

3   a client interface module which receives requests from clients via a

4   communication link;

5   an NAS monitor module which monitors operation of each NAS server, and

6   receives a request for a content file from a client via the client interface, such that

7   the NAS monitor module selectively establishes a data stream between that client

8   and a selected NAS server which stores the requested content file, such that the

9   selected NAS server provides the content file to the client via the data stream,

10   independent of other NAS servers.

11

12   22.   The management controller of claim 21, wherein at least one NAS

13   server comprises one or more data storage devices and a storage controller for

14   coordinating access to the data storage devices.

15

16   23.   The management controller of claim 21, wherein at least one NAS

17   server concurrently provides multiple data streams to multiple clients.

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19   24.   The management controller of claim 21, wherein one or more NAS

20   servers are spare NAS server, and the NAS monitor module is configured to detect a

21   fault in an NAS server currently providing requested content file to a client, and to

22   identify a spare NAS server storing that requested content file, such that the

23   management controller selectively re-establishes said data stream between that

24   client and the spare NAS storing the requested content file, wherein that spare NAS

25   server provides the content file to the client via the data stream, independent of

26   other NAS servers.

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28   25.   The management controller of claim 21, wherein management

29   controller is configured to allow addition or removal of one or more NAS servers.

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1   26.   The management controller of claim 21, wherein each NAS server

2   includes a data streaming interface module which provides service for reading

3   content files from that NAS server and sending the data to the requesting client via a

4   data stream.